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# PSYCHOLOGICAL IMPACT OF AIRPOWER

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.



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**15. Abstract:** Airpower's contributions to a given campaign plan are typically planned and assessed primarily in terms of actual destruction of enemy equipment, facilities, and personnel. Often overlooked is the substantial psychological impact airpower has on the forces targeted. World War II, the first year of the Korean War, and the 1991 Gulf War provide examples in which airpower played a key role in reducing enemy morale, and hence, combat effectiveness. Conversely, the latter portion of the Korean War and the Vietnam War illustrate how airpower's potential contributions can be dissipated if not properly employed. To maximize airpower's inherent ability to create a significant psychological impact on the battlefield, "lessons learned" from these conflicts should be institutionalized in the form of Joint and supporting Service doctrine to guide operational commanders and their staffs in future planning efforts.

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ABSTRACT

Airpower's contributions to a given campaign plan are typically planned and assessed primarily in terms of actual destruction of enemy equipment, facilities, and personnel. Often overlooked is the substantial psychological impact airpower has on the forces targeted. World War II, the first year of the Korean War, and the 1991 Gulf War provide examples in which airpower played a key role in reducing enemy morale, and hence, combat effectiveness. Conversely, the latter portion of the Korean War and the Vietnam War illustrate how airpower's potential contributions can be dissipated if not properly employed. To maximize airpower's inherent ability to create a significant psychological impact on the battlefield, "lessons learned" from these conflicts should be institutionalized in the form of Joint and supporting Service doctrine to guide operational commanders and their staffs in future planning efforts.

## INTRODUCTION

Airpower's contributions to a given campaign plan are typically planned and assessed primarily in terms of actual destruction of enemy equipment, facilities, and personnel. Often overlooked is the substantial psychological impact airpower has on the forces targeted. These psychological effects can be as debilitating, if not more so, than the physical destruction identified through traditional battle damage assessment (BDA) methods. This paper examines specific air operations in World War II, Korea, Vietnam, and the Gulf War to determine common characteristics which create significant erosion of the enemy's will to fight. Drawn from the lessons learned of this analysis is a set of guidelines for operational commanders and their staffs to use in planning the employment of airpower to maximize its psychological impact against an enemy in future conflicts.

Joint Publication 3-0 is quite correct in noting that "all military operations have a psychological effect on all parties concerned--friendly, neutral, and hostile."[1] Yet scant guidance appears in joint doctrine on how to exploit these psychological effects through the use of airpower. Appendix A

of Joint Pub 3-56.1, the Joint Air Operations Plan Format, merely advises to "ensure joint air operations support established psychological operations."[2] Even in this instance, however, the term "psychological operations" (PSYOP) is widely taken to refer solely to the dissemination of various predetermined PSYOP themes to a target population through such media as leaflets, loudspeakers, radio and television broadcasts, etc. Moreover, the process used to measure the effects of application of force against an objective, battle damage assessment, is defined by Joint Pub 1-02 as being "composed of physical damage assessment, functional damage assessment, and target system assessment."[3] No mention is made of attempting to ascertain how a given strike or operation may have affected the enemy psyche, apart from the physical results of that action.

Yet in every major armed conflict the United States has been involved in over the past sixty years, documented cases exist in which airpower has had a substantial impact on enemy morale, greatly reducing the opponent's combat effectiveness, regardless of the physical damage inflicted. The following sections examine these instances for the purpose of illuminating how airpower might be better employed to

capitalize on its inherent ability to create such a psychological impact.

## WORLD WAR II

Despite high levels of destruction claimed by Allied fighter-bomber pilots against German armor, evidence gathered by Allied Operational Research Sections (ORS) shortly after each engagement indicates that even intense air attack against armored vehicles was likely to result in only a small number of tank kills.[4] Far from being ineffective, however, these attacks often proved decisive simply due to the disruption and demoralization caused by the level of firepower concentrated on their targets. In the North African Campaign, for example, once the protection of the *Luftwaffe* had been eliminated, the psychological toll of Allied air attack on German forces became so great an entry in the official Afrika Korps diary noted, "Officers and men were badly shaken and their fighting capacity considerably reduced by the enforced dispersal, lack of sleep, and the strain of waiting for the bomb."[5]

Following the Allied breakout from Normandy in July 1944, a German column near the village of la Baleine was attacked by Royal Air Force (RAF) Hawker Typhoons carrying three-inch rockets. Immediately apparent from subsequent ORS reports was

the high number of Panzers destroyed or abandoned intact by their crews relative to the number destroyed by rocket fire. Tanks and self-propelled artillery pieces were found completely undamaged with full loads of fuel and ammunition. Perhaps most telling was that there were no German graves in the area, and only one corpse was found. All this suggests the German troops fled from the column once they realized an air attack was imminent. Furthermore, to avoid further air attack, they made no attempt afterward to recover the remaining battle-worthy tanks.[6]

Another instance of German crews abandoning their tanks under air attack occurred during the Mortain offensive of August 1944, the only large-scale German armor offensive mounted in Normandy. The U.S. 30th and 9th Infantry divisions were defending near Mortain when a German force including 70 Panthers, 75 Panzer Mk IVs, and 32 self-propelled guns penetrated about three miles into 30th Division's front. RAF Typhoons and U.S. P-47 Thunderbolts responded quickly. Spotting a concentration of 60 tanks and 200 vehicles along a hedge-lined road, Allied pilots attacked the front and rear of the column, bringing it to a halt. Great confusion resulted, and German tank crews were seen bailing out and running for cover regardless of whether or not their tanks were left

blocking the road. Although few tanks were actually hit by Allied aircraft, the air attack was primarily responsible for the success in stopping the German advance. When an experienced NCO of a U.S. anti-tank unit was asked by ORS about the number of abandoned tanks on the battlefield, he replied, "There is nothing but air attack that would make a crack Panzer crew do that."[7]

The extent of demoralization inflicted on German soldiers by Allied airpower was summed up by Lt Gen Fritz Bayerlein, commanding general of the German Panzer-Lehr Division:

> The long duration of the bombing, without any possibility for opposition, created depressions and a feeling of helplessness, weakness, and inferiority. Therefore, the morale attitude of a great number of men grew so bad that they, feeling the uselessness of fighting, surrendered, deserted to the enemy, or escaped to the rear, as far as they survived the bombing. Only particularly strong-nerved and brave men could endure this strain.[8]

KOREAN WAR

Prior to the intervention of Chinese forces in the Korean War, United Nations (UN) airpower succeeded in demoralizing important segments of the North Korean Army, even while UN forces were being driven into the Pusan perimeter. It was during this opening phase of the war that 90 percent of all North Korean prisoners were taken (August to December 1950).[9] Despite high morale among North Korean soldiers at the time of

the initial June invasion, it had plummeted by mid-September. Of the various causes of this deterioration in morale, the most important was UN air attacks.[10] A report issued by the Far East Command G-2 Translator and Interpreter Service, based on some 2000 enemy prisoner of war (EPW) interrogation reports, showed that over half the EPWs felt that direct and indirect effects of UN airpower were the primary cause of loss of morale. A separate survey of 825 EPW reports containing specific references to morale indicated that psychoneurosis engendered by UN air attack may actually have outweighed the physical destruction done by airpower.[11]

When Chinese troops intervened in November 1950, their morale was also initially high. They were among the best of the People's Liberation Army (PLA), and many had experience in fighting the Japanese in World War II or the Chinese Nationalists in the recent civil war.[12] Indeed, during the first five months of the PLA intervention, only 1700 Chinese prisoners were captured. It was not until the PLA's spring offensive of April 1951 that large numbers of Chinese troops began surrendering. The difference was that, previously, when a PLA offensive had concluded, the communists had been allowed to withdraw to reorganize and resupply. In this case, however, the UN Eighth Army mounted a vigorous counterattack which

routed the retreating PLA forces.[13] The UN's unchallenged air supremacy was particularly depressing to the Chinese cadres, who were directly responsible for maintaining PLA troop morale. Of 18 veteran cadres who were asked to identify the chief difficulties experienced by the PLA in the early spring of 1951, 14 cited UN air attacks as the leading factor.[14] UN airpower, even if just present in the vicinity, had the following effects on inhibiting enemy ground fire:

- To avoid detection, communist cadres instructed their troops not to fire at UN aircraft.
- Communist troops became so frightened they failed to carry out instructions to fire.
- The psychological effect was so great that stunned enemy troops were unable to fire their artillery or other weapons for as long as 25 minutes after an air attack.[15]

Once truce negotiations began at Kaesong in July 1951, the character of the war changed. UN forces were ordered to maintain their positions during the first five weeks of talks. This gave the communist forces much needed time to reorganize, reinforce, and resupply. Because of concern in Washington about increasing U.S. casualties, the United Nations Command adopted an "active defense" posture in Korea. Operations would be limited to defense of the existing front. From the end of

November 1951 until the cessation of hostilities in July 1953, very few additional Chinese or North Korean EPWs were taken.

Several factors account for the improvement in the enemy's psychological state during this period. First, due to the static nature of this phase, the communists were able to adequately feed their troops. This in itself provided quite a morale boost. Second, the lull in the war had allowed PLA troops to dig deep underground shelters to protect them from the physically and psychologically damaging UN air attacks. Finally, the UN's active defense allowed the communists to decide when and where to fight. By attacking infrequently and only at night, they were able to avoid the day-only capabilities of UN airpower and restore troop morale between engagements. The combination of these three factors convinced cadres and troops alike that, despite the UN's superior firepower, the war did not seem nearly so unequal and futile as before.[16]

VIETNAM WAR

The total tonnage of bombs dropped in the Vietnam War was much greater than that dropped in World War II[17], yet the effect was still insufficient to cause significant diminution of the enemy's will to continue fighting. To be sure, many

low-level Viet Cong (VC) defected, or "rallied," to South Vietnam during the course of the war, but the vast majority of these individuals were among the lowest-ranking and least ideologically motivated. Less than one percent of the ralliers were high- or middle-echelon cadres.[18] North Vietnamese Army (NVA) troops were equally unlikely to defect or be captured. The combined total of NVA prisoners and defectors only amounted to about three percent of the number of NVA troops killed during the war. No communist main force units of any significant size ever surrendered *en masse*, and at no time did there occur any catastrophic break in communist morale.[19]

There are several reasons for this. The ROLLING THUNDER bombing campaign of 1965-1968 was intended by U.S. political leaders to be a gradually escalating application of military force to send "signals" to the leadership of North Vietnam. Long pauses were built into the campaign to allow North Vietnam to reflect and respond positively to the signals the U.S. was sending. Rather than seeing airpower as a symbol of American resolve and military might, however, the North Vietnamese perceived the graduated response strategy as showing indecisiveness. Furthermore, it tended to inure the North Vietnamese to air attack and allowed them time to build up their air defenses. As Soviet and local air defense

capabilities improved, U.S. airpower seemed more vulnerable and less threatening. All this led many NVA and VC troops to believe that, while their side might not win, they could wage a protracted war and keep South Vietnam and the United States from winning.[20] Such attitudes were enough to prevent any serious degree of defeatism from setting in at the unit level.

Some of the same characteristics of the latter period of the Korean War also existed in Vietnam. For the most part, VC and NVA forces decided when and where large-scale combat would occur. If confronted with numerically superior forces, they would generally retreat to safe areas in South Vietnam or sanctuaries in North Vietnam, Laos, and Cambodia. Since 75 to 85 percent of VC and NVA combat deaths occurred during the course of communist-initiated attacks,[21] the casualty rate could be controlled and limited to one that could be sustained indefinitely. The fact that VC and NVA main force units engaged in combat only a few times a year[22] also explains why communist units were able to maintain morale and cohesion even after a devastating defeat.

Communist forces in Vietnam also avoided sustained air attack. About 75 percent of sorties flown in South Vietnam were interdiction missions,[23] designed to impede communist supply movements. The remaining 25 percent were in support of

allied troops in contact with the enemy or aimed against known or suspected VC/NVA positions. By hiding in small groups among the hills and valleys underneath the triple-canopied jungle, even large communist units could remain undetected. To gain additional protection, VC and NVA units moved almost daily. Any intelligence on their location quickly became outdated. The chance of a given communist unit being attacked by air more than once was remote. Even when a communist troop concentration was located and struck by air, the psychological impact was rarely exploited by ensuing ground attack. Due to political imperatives of holding down American casualties, U.S. infantry forces were unable to routinely pursue the enemy after initial battlefield successes. As a result, defeated communist troops were allowed to escape and recuperate, both physically and psychologically.[24]

GULF WAR

The 38-day air attack which began offensive coalition operations against Iraq on 17 January 1991, while overwhelmingly effective in terms of physical destructiveness, may well have been even more devastating in its psychological impact on deployed Iraqi forces. Although coalition planners anticipated that degradation of Iraqi morale would be a by-

product of the air campaign, it was not identified as an explicit objective. The actual extent and magnitude of Iraqi morale collapse somewhat surprised even the air campaign planners.[25]

Iraqi ground troops went into the conflict with confidence that their weapons and equipment would be more than sufficient to inflict enough casualties to cause American will to evaporate. Attacks on Israel would destroy the coalition, and Iraq's weapons of mass destruction provided a trump card, if needed. What Iraqis did not anticipate was the tremendous psychological toll that would be exacted from them by nearly six weeks of constant aerial barrage. In particular, B-52s and A-10s were to become the most dreaded weapons to Iraqi troops. Lt Gen Charles A. Horner, Joint Forces Air Component Commander (JFACC), stated in a 1994 interview:

> In fact, the 52 and the A-10 are the two psychological weapons....In my research--and I read every POW report--there was nothing on the 15,000 lb. bomb, but I got a lot on the B-52 and the A-10.[26]

The paralyzing fear and sense of complete helplessness of troops subjected to B-52 strikes were often amplified by PSYOP leaflets dropped before and after the raid, first telling them the bombing was coming, and then telling them afterward another raid would occur in 24 hours. Their only alternative was to

leave their equipment and desert. "Walk toward Mecca," the leaflets advised.[27] By the time the coalition ground offensive began, Iraqi ranks had been thinned by desertions of at least 160,000 of the original 400,000 troops estimated to have been deployed in the Kuwaiti theater of operations. Another 85,000 surrendered to coalition ground forces with little or no resistance.[28] One Iraqi officer told his interrogator he had surrendered because of B-52 strikes, even though his position had never been attacked by B-52s. When his interrogator pointed this out to him, the officer replied, "That is true, but I saw one that had been attacked."[29]

An interesting anecdote revealing the effectiveness of the A-10 "Warthog" in inducing psychological effects on enemy troops is related by COL James P. Noll, commander of the 13th Psychological Operations Battalion (Enemy Prisoner of War) during DESERT SHIELD/DESERT STORM. As the rapid influx of Iraqis began filling coalition EPW camps, near-riot conditions developed as staunch supporters of Saddam Hussein attempted to foment trouble. Playing out a hunch, COL Noll arranged for a flight of A-10s to "inadvertently" fly over one of the EPW camps. Evidently, the Iraqi EPWs, who had seen first-hand the ferocious effects of A-10s on their own armor formations, grasped the significance of A-10s once again flying overhead.

As COL Noll put it, "The desired change in behavior of the EPW was immediate. From then on, periodic flights of U.S. aircraft over all of the EPW camps took place."[30]

## CONCLUSIONS AND RECOMMENDATIONS

The four wars discussed in this paper, as well as other conflicts not covered here, provide ample evidence that airpower, when properly employed, can provide benefits in the form of psychological impact on the enemy which equal or exceed the direct effects of physical destruction of weapons and materiel. To maximize these benefits, however, the psychological implications of airpower need to be overtly considered when planning the use of airpower in a given operation or campaign. To institutionalize such consideration in the operational planning process, recommend the following "lessons learned" be incorporated into Joint and supporting Service doctrine:[31]

- The overall campaign strategy should promote psychologically effective attack. As witnessed in Vietnam, an enemy which is allowed to hide and disperse will be relatively immune from airpower's psychological effects.

- Make demoralization an air campaign objective. While this responsibility will ultimately rest on the shoulders of the JFACC, personnel expert in psychological effects should be included on the air planning staff.

- Keep the enemy under sustained attack. Contrasting the latter stages of the Korean War and the Vietnam War with the clear successes of the Gulf War illustrates the importance of *sustained* air attack.

- Use heavy bombers dropping large amounts of ordnance for surprise and shock effect. Even when they failed to hit their intended targets, B-52s were often the most feared aircraft by enemy troops in both the Vietnam and Gulf wars. Precision targeting will make this type of attack even more effective.

- Condition the enemy to abandon his equipment. While this will be a natural by-product of precision attacks against enemy air defenses, artillery, and armor, creative use of PSYOP measures can enhance the effect.

- Exploit psychological effects of airpower with prompt ground operations. The psychological advantage gained by air attack is a perishable commodity. To realize the benefits of weakened morale and unit cohesion, ground attacks should be planned to closely follow air strikes.

- Integrate PSYOP with air operations. Leaflet drops preceding and following B-52 strikes in DESERT STORM are an example of how integrated operations simultaneously leveraged the effectiveness of the bombing and improved the credibility of PSYOP messages theaterwide.

- Make a conscious effort to measure the psychological impact of airpower. The concept of "battle damage assessment" should be expanded to include the impairment of enemy combat capability due to fear, demoralization, and other non-physical effects brought about by the application of airpower, as well as other ordnance delivery methods.

Finally, although not requiring any doctrinal changes *per se*, the psychological aspects of airpower should be emphasized

in military education and training. Too many U.S. military officers reach field-grade rank believing psychological degradation of the enemy is merely a serendipitous effect of air attack. PSYOP is then thought to be the sole province of specialized organizations such as the U.S. Army's 4th Psychological Operations Group. Instead, officers should be exposed to the concepts of integrated psychological planning early and throughout their careers.

NOTES

1. Joint Chiefs of Staff, Doctrine for Joint Operations (Joint Pub 3-0)(Washington: 1 February 1995), III-24.

2. Joint Chiefs of Staff, Command and Control for Joint Air Operations (Joint Pub 3-56.1)(Washington: 14 November 1994), A-3.

3. Joint Chiefs of Staff, DOD Dictionary of Military and Associated Terms (Joint Pub 1-02)(Washington: 28 January 1998), 54.

4. Ian Gooderson, "Allied Fighter Bombers Versus German Armour in North-West Europe 1944-1945: Myths and Realities," The Journal of Strategic Studies, June 1991, 210.

5. Andrew P.N. Lambert, The Psychology of Airpower (London: Royal United Services Institute for Defence Studies, 1995), 22.

6. Gooderson, 218-219.

7. Ibid., 219-223.

8. Lambert, 24.

9. Stephen T. Hosmer, Psychological Effects of U.S. Air Operations in Four Wars, 1941-1991 (Santa Monica, CA: RAND, 1996), 100.

10. Ibid., 103-104.

11. Robert F. Futrell, The United States Air Force in Korea, 1950-1953 (Washington: U.S. Government Printing Office, 1981), 168, 173.

12. Hosmer, 107.

13. Ibid., 107-108.

14. Ibid., 112-113.

15. Alexander L. George, Psychological Aspects of Tactical Air Operations (Korea), RM-3110-PR (Santa Monica, CA: RAND, April 1962), 11-12.

16. Hosmer, 115-119.

17. Lambert, 52.

18. Hosmer, 125-126.

19. Ibid., 128-129.

20. Konrad Kellen, Conversations with Enemy Soldiers in Late 1968/Early 1969: A Study of Motivation and Morale, RM-6131-1-ISA/ARPA (Santa Monica, CA: RAND, September 1970), 61-69.

21. Thomas C. Thayer, War Without Fronts: The American Experience in Vietnam (Boulder, CO: Westview Press, 1985), 91.

22. Hosmer, 135.

23. Thayer, 84.

24. Hosmer, 137-139.

25. Ibid., 161.

26. Lambert, 65.

27. Ibid., 63-64.

28. Hosmer, 153.

29. Ibid., 165.

30. James P. Noll, The 13th Psychological Operations Battalion (EPW) During Mobilization, DESERT SHIELD/DESERT STORM, and Demobilization (Carlisle Barracks, PA: U.S. Army War College, 1993), 53-54.

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